IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT

APPLICANT: Frank T. Keyser

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INVENTION: "METHOD AND APPARATUS FOR IN-MOLD LABELING OF A BLOW MOLDED ARTICLE"

Hon. Commissioner of Patents and Trademarks

Washington, D.C. 20231

S I R:

In accordance with the provisions of 37 C.F.R. Section 1.56, applicant requests that citation and examination of the following references be made during the course of the examination of the above-referenced application for United States Letters Patent.

U.S. PATENT NO.	INVENTOR	ISSUE DATE
256,476	Guilford	April 18, 1882
493,476	Burr	March 14, 1893
2,311,156	Casto	February 16, 1943
2,319,156	Perkins	May 11, 1943
2,326,382	Moreland et al	August 10, 1943
2,653,580	Moore, Jr.	September 29, 1953
2,684,775	Von Hofe	July 27, 1954
2,745,665	Labombarde	May 15, 1956
2,758,106	Sartakoff	October 23, 1956
2,853,737	Harlow	September 30, 1958
2,943,604	Chubb	July 5, 1960
3,025,838	Klancnik	March 20, 1962
3,053,529	Dunn	September 11, 1962

U.S. PATENT NO.	INVENTOR	ISSUE DATE
3,068,528	Owens	December 18, 1962
3,072,969	Du Bois	January 15, 1963
3,091,256	Becker	May 30, 1963
3,108,850	Brandt	October 29, 1963
3,151,193	Thornton	September 29, 1964
3,176,978	Baker et al	April 6, 1965
3,186,029	Joseph	June 1, 1965
3,190,184	Carpenter	June 22, 1965
3,202,060	Grotness	August 24, 1965
3,207,822	Makowski	September 21, 1965
3,227,787	Battenfeld	January 4, 1966
3,267,186	Battenfeld	August 16, 1966
3,272,681	Langecker	September 13, 1966
3,275,189	Goldsborough et al	September 27, 1966
3,287,011	Currie, Jr.	November 22, 1966
3,287,198	Battenfeld	November 22, 1966
3,292,209	Borkmann	December 20, 1966
3,324,508	Dickinson	June 13, 1967
3,559,536	Mason	February 2, 1971
3,575,409	Calvert	April 20, 1971
3,608,020	Langecker	September 21, 1971
3,657,405	Langecker	April 18, 1972
3,674,391	Welle	July 4, 1972
3,759,643	Langecker	September 18, 1973
3,759,645	Langecker	September 18, 1973
3,797,822	Anderson	March 19, 1974
3,801,689	Langecker	April 2, 1974
3,860,375	Kinslow, Jr. et al	January 14, 1975
3,986,807	Takegami et al	October 19, 1976

U.S. PATENT NO.	INVENTOR	ISSUE DATE
4,002,103	Martin	January 11, 1977
4,019,845	Birkhofer et al	April 26, 1977
4,211,150	Framberg	July 8, 1980
4,293,365	Geyser et al	October 6, 1981
4,322,067	Masselin et al	March 30, 1982
4,355,967	Hellmer	October 26, 1982
4,359,314	Hellmer	November 16, 1982
4,394,011	Dalton	July 19, 1983
4,397,625	Hellmer et al	August 9, 1983
4,479,644	Bartimes et al	October 30, 1984
4,479,770	Slat et al	October 30, 1984
4,479,771	Slat et al	October 30, 1984
4,498,854	Ross	February 12, 1985
4,639,206	Darr	January 27, 1987
4,639,207	Slat et al	January 27, 1987

EXPLANATION OF RELEVANCE

The above referenced U.S. patents were located during a recent study of the art relating to in-mold labeling. Copies of the five most pertinent references and an explanation of their relevance are included herewith. Copies of the remaining, less pertinent references are not furnished herewith so as to not unnecessarily burden the record. The Examiner has ready access to all such references as they are all U.S. patents.

Hellmer, U.S. Patent No. 4,355,967 discloses a transfer device for transferring labels from a stack into mold cavities of an existing mold machine. The transfer device includes a pivotally mounted arm that is positioned and pivoted by a linear drive shaft. The drive shaft is positioned by a cam that is

carried by an associated mold half. The transfer head is mounted on the arm for pivoting about the arm by way of an actuator that includes drive pulleys coupled by drive belts and includes vacuum heads.

Hellmer, U.S. Patent No. 4,359,314 discloses a label transfer device including a pivotally mounted arm carrying a transfer head. A cam, carried by an associated mold half, cooperates with a plurality of cams and cam followers to swing the transfer head in an arcuate path of 270^{o} between the label dispenser and the mold half so that the label can be placed therein.

Hellmer et al, U.S. Patent No. 4,397,625 discloses an in-mold labeler having a carriage journaled on support rods where the carriage is driven between the label dispenser and the mold by a first fluid motor including a piston cylinder. The carriage itself includes a second fluid motor in which a piston is positioned, the piston being secured to the label pickup head that includes suction cups. The carriage is hydraulically driven between the label dispensers and the mold sections by the first fluid motor and piston, while the pickup head is hydraulically driven by the second fluid motor and piston between extended and retracted positions to retrieve labels and thereafter place them in the mold sections.

Slat et al, U.S. Patent No. 4,479,770 discloses a dispensing head mounted for rectilinear movement along a first axis between a label magazine and open mold sections. A label carrier is mounted on the dispensing head for rectilinear movement between retracted and extended positions along a second axis transverse to the first axis. First and second solid mechanical drives are also provided wherein the second drive includes at least an

elongated support on which the dispensing head is supported for movement along the length of the support between the label magazine and the mold and is mounted on the base for rotation about its longitudinal axis. Upon rotation of the elongated support, the label carrier will be moved outwardly and inwardly on the second transverse axis.

Slat et al, U.S. Patent No. 4,639,207 is a division of Slat et al U.S. Patent No. 4,479,770 and discloses an identical in-mold label dispenser for a blow molding machine.

The remaining patents are listed because they either disclose various types of in-mold labeling devices or specific elements or sub-combinations of possible interest. Applicant believes that, with respect to the present invention, these remaining references are less relevant that those explained above and do not warrant any detailed explanation.

The present invention provides a method and apparatus for in-mold labeling of a blow molded article having a guide track means forming a closed circuit through which a trolley or carriage is continuously driven. The circular mold path of the rotary blow molding machine forms a primary path while the guide track means forms a secondary path and a specific overlapping segment of the two paths extends through a discrete distance through which the mold and the carriage move simultaneously and in unison at zero relative velocity thereby permitting the label to be transferred from the carriage to the mold without interruption of either device.

Both the apparatus and method claims develop the distinguishing features. For example, claim 1 defines the driving means for simultaneously and synchronously driving the wheel and the carriages through a discrete distance at zero

relative velocity and there is also defined the means to move the label suction means and the label into the adjacent mold part while moving through the discrete distance at zero relative velocity.

Method claim 2 defines the step of moving the mold parts and the carriage through the matched segment in unison at zero relative velocity.

Corresponding definitions of such distinction over the art is defined in the other claims as well. None of the references anticipates such novel concept whether considered singly or in combination with one another.

New claims 34-38 have been added before action to round out the protection warranted on this invention. Such claims define the concept wherein a grasping means has a first set of cups engaging a label on a first line, while the second set of cups is spaced apart a lesser distance so it can engage the label on the same line, but between the first set of cups, thereby facilitating efficient transfer.

Thus, the present invention, as disclosed and claimed, is distinguishable over the prior art and, as such, applicant respectfully requests favorable consideration of all the claims 1-38.

Respectfully submitted,

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